

**ABSTRACT OF THE INVENTION**

The invention provides a chimeric non-immunoglobulin binding polypeptide having an immunoglobulin-like domain containing scaffold having two or more solvent exposed loops containing a different CDR from a parent antibody inserted into each of said two or more loops and exhibiting selective binding activity toward a ligand bound by said parent antibody. Also provided is a chimeric non-immunoglobulin binding polypeptide having an immunoglobulin-like domain containing scaffold having less than about 20% sequence identity to a human immunoglobulin variable region framework domain, said immunoglobulin-like domain containing scaffold having two or more altered solvent exposed loops and exhibiting selective binding activity toward a disparate ligand. A chimeric ThyOx binding polypeptide having one or more altered immunoglobulin-like domain loop regions of a ThyOx family polypeptide and having selective binding activity toward a non-ThyOx ligand as well as a chimeric ThyOx carrier polypeptide comprising a at least one immunoglobulin-like domain containing scaffold derived from a ThyOx family polypeptide, and a heterologous binding polypeptide exhibiting selective binding activity toward a non-ThyOx ligand are further provided. Additionally, the invention provides nucleic acids encoding a non-immunoglobulin or ThyOx binding polypeptide of the invention.